# The global farmer: typology, institutions and organisation

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### **Abstract**

The purpose of this paper is to study the phenomenon of 'global farmers' and how they are organised. The paper establishes a definition and a typology of global farming; sketches a theoretical framework based on property rights theory; and uses case studies to illustrate the theory and typologies. Global farmers are defined as farmers or farming enterprises that carry out activities in more than one country. Specific objectives of the present paper are first to define a typology of global farming, second to explore evidence of the existence of and incentives for global farming, third to propose a theoretical approach to examining the global farmer phenomenon, and fourth to discuss regularities in the governance and contractual choices made by farmers to coordinate their production. Global farms are found to have a variety of governance forms; they tend to not be operated as traditional family farms, but are more often incorporated or operated as formal partnership corporations. The farmers also form alliances and contractual arrangements with other farmers and agri-businesses in both the host country and their country of origin. The study is based on case studies developed in Latin America and Europe. The results of a questionnaire completed by four farmers reveal their reasons for choosing global farming, the specific contract profile for farm resources and product marketing as well as the institution-related costs faced by farmers. Specific contracts for land, labor and farm inputs are compared in relation to the available services, credit, horizontal collaboration and product distribution.

Keywords: global farming, agricultural contracts, foreign direct investment

### 1. Introduction

Although the migration of farmers in search of new land is a phenomenon as ancient as human history, it is reemerging in various forms in the new global economy. We refer here to the phenomenon of the 'global farmer', which has become more pronounced in recent years in both the developed and developing worlds. Our focus is on its institutions and organisations. Global farmers are defined as farmers or farming enterprises that carry out activities in more than one country or at distant sites within the same country or region.

Agriculture is one of the most traditional activities carried out by human beings. In the past, farmers were basically connected to the land in such a way that it was not possible to differentiate between their personal lives and the economic activities they performed. Farmers used to work, live and die in the same area; they shared resources with neighbours and trade was mostly based on personal relations and informal agreements – this is referred to as the 'social embeddedness level' in Williamson's (2000) four levels of social analysis. Local connections provided the social ties that explained a large part of the governance

mechanisms used to coordinate the efforts of production and distribution, including cooperation in production, which is seen as second order economising by Williamson (2000).

As agriculture and farming activities have changed over recent decades, personal links with the local society have become less important than they were in the past. In order to expand trade, institutions have been built to promote impersonal relations (North, 1990). Personal ties have been replaced by formal contracts. Agricultural corporations are replacing activities formerly developed on a personal or family basis. Since this phenomenon does not follow a homogeneous path, it is expected that global farmers choose to engage in formal transactions supported either by institutional rules or international networks that offer them the opportunity to accomplish impersonal transactions. Agriculture and agro-industrial relations based on social ties are thus a less likely choice for newcomers, and this will in turn affect the architecture of institutional arrangements in production such as the design of hybrid contractual formats to coordinate production and distribution.

It is very important to properly analyse and understand the global farmer phenomenon because it has important

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implications for the development of agriculture in both home and host countries. As farmers leave their homelands, they often take the available monetary, human and physical capital along with them. This can have positive and negative implications for the home country. The purpose of this paper is not to analyse these effects, but one can point to economies of scale as a positive effect, while the migration of human and monetary capital may have devastating impacts. The host countries usually welcome new investments in most industries, including agriculture. However, the new farming may also have unwelcome effects, such as damage the environment and alterations to the socio-economic landscape of the host country.

In this paper we focus more on the *who-why-how* questions concerning global farming. Who is most likely to leave their homeland, what are the factors determining who is leaving and how do they organise their farming in the new lands?.

Specific objectives of the present paper are first to define a typology of global farming, second to explore evidence of the existence of and incentives for global farming, third to propose a theoretical approach to examining the global farmer phenomenon; and fourth to examine regularities in the governance and contractual choices made by the different types of farmers to coordinate their activities.

We propose a definition and an investigative analysis of a phenomenon that we expect will increasingly occupy discussions among agricultural circles in the very near future. Although no data exists yet on the extent of this phenomenon, it is likely to be quite significant and is very dynamic. The phenomenon is of interest not only to the agricultural economist and economic sociologist, but especially to the organisational economist: it is a natural experiment of organisational dynamics, where the control variables are the entrepreneurial talent which remains constant between the two areas, while the institutional and economic environments change, This, we expect, is a great opportunity for studies on the organisation of the firm. Other issues that may be of particular interest to the readers of this Journal concern management and labour relations. Also, although we do not deal with these explicitly in this paper, the organisation of marketing services as well as environmental and food safety issues may prove to be of utmost importance.

The paper is organised in six parts. The second part follows this introduction and presents the phenomenon of global farming; the third proposes a theory grounded on new institutional economics. The fourth part presents the methodology and part five presents and discusses the four case studies. Part six presents our conclusions.

### 2. Characteristics and evidence

Evidence of global farming abounds in the more diverse agricultural areas. After the dissolution of the Soviet Union a significant institutional reform took place in Europe involving among other aspects the redistribution of property rights of land. The existence of good soils in Eastern European countries in addition to restrictions to increasing productive capacity in their countries of origin motivated farmers to start new operations in Poland, the Ukraine, and the Baltic countries, among others. In Latin America, the number of Brazilian farmers who are also carrying out activities in Paraguay and Bolivia is estimated at 500,000. They have even received a new denomination of 'Brasiguayos'. Since Brazil still has large areas yet to be farmed, farming opportunities at the agricultural frontier have attracted farmers from the US and Argentina as well as farmers from the more Southern states of Brazil. A US company estimated that due in large part to the low cost of land about 200 US farmers were growing soybeans in Brazil in 2003, especially in the cerrado region (www.migrationint. com.au). This figure would certainly be higher today. In the South the farms tend to be small and the expansion of sovbean cultivation has motivated families to settle in the frontier areas. This is also the case for coffee farmers from the state of Minas Gerais, who move to Bahia in search of cheap land to expand their production.

In all cases the arrival of strangers without local social networks creates significant changes in the way transactions are managed. More important for our purpose is that the phenomenon is still in progress and offers an ideal laboratory in which to study how transactions are carried out under different institutional environments.

## 3. Theory

It is necessary to examine the organisation of the global farm in the context of the economic theory of the organisation of agriculture and the farm in particular. First, we draw attention to what is called the 'industrialisation of agriculture' and secondly to the organisation of the farm. In his classic 1962 paper, Breimyer divides agriculture into three economies: 'primary production from soil'; secondary, or 'conversion of feedstuffs into livestock products'; and the 'marketing of products from farm to retail' (Breimyer, 1962: 679). What distinguishes the three economies is their dependence on fixed inputs. The primary economy is highly dependent on the fixed input - land, whereas the marketing economy is highly dependent on social capital, which is not fixed in the long run. The livestock economy depends on feedstuffs (an output of the primary sector) and capital. Breimyer also defines the 'industrialisation'

of agriculture as the transition from an agriculture based on fixed land resources to an agriculture based on variable (manufactured) inputs. He characterised the first economy as the least industrialised; the marketing and agribusiness economy as the most industrialised and the animal production as intermediate. In a nutshell, an industrialised economy is 'totally self-contained and self-sustained [...] in which no factors are fixed, but all are variable' (Breimyer, 1962: 681). He added later '[...] all factors are perfectly mobile and divisible' (Breimyer, 1978: 39). This definition and consequent analysis are therefore based on the presence of increasing returns and economies of size. Breimyer even predicted that the primary economy is catching up in the industrialisation process: 'Production on US farms has been shifting at a fast pace to an industrial, capital-using character' (Breimyer, 1962: 685).

The issue of the industrialisation of agriculture re-appeared in the literature in the 1990s (Sheldon, 1996; Rhodes, 1995; Barkema, 1994; Knoeber, 1989). Two strands of arguments can be identified here: demand-driven and supply-driven industrialisation. Barkema (1994) and others who followed him are the main proponents of the demand-driven industrialisation hypothesis. On the supply side of the argument, Rhodes (1993), focusing on the pork sector (2<sup>nd</sup> economy in Breimyer's classification), argues that the motivation for the drive towards industrialisation is efficiency, innovation, and economies of size. Furthermore, the industrialisation of the pork industry in the US is not driven by vertical, but rather by horizontal integration. Rhodes (1995) suggests that the franchising model is useful in explaining this process:

'The approximate model may be the fast food franchise in which a franchisor such as McDonald's saves on capital while obtaining highly-motivated local managers and greatly increasing its sales by contracting with individual franchisees. Likewise, the hog contractor can employ all, or most, of his capital on hogs and feed, rather than on land and facilities while the grower avoids certain market risks and obtains a key role in a hog operation that he could not capitalise on his own' (Rhodes, 1995: 113).

Naturally, more recent approaches to the problem of the farm have been influenced by evolutions in economic theory – especially in new institutional economics. Roumasset (1995) provided one useful description of why we observe different structures of agriculture. He focused on explaining the choice between rent, wages and share contracts as dependent upon the degree of specialisation between labour and management. He proposed a constitution type of relationship between the owner and workers and applied agency theory to show how share cropping, for example, can be efficient. In the models presented by Roumasset specialisation of labour and management occurs within the firm.

Allen and Lueck (1998) explain the predominance of the family farm as a result of the trade-off between moral hazard, which occurs because of the biological nature of agricultural production, and the gains from specialisation. In the Allen and Lueck (1998) framework production information is asymmetric, and to avoid the results of moral hazard the most efficient form of agricultural production is the sole proprietary system, i.e. the family farm where specialisation occurs within the farm. They apply their argument on farming systems in North America, but do not explain why many farms with intensive livestock production have a corporate structure, at least where it is not disallowed by legislation.

Although not directly focusing on the farm problem, a related line of literature concerning economies of size and vertical integration started with the work of Smith (1776) and Stigler (1951). Smith developed the idea of external economies, which are economies outside the firm, with the magnitude of the external economies determined by the size of the market. This led to the expectation that the creation of monopolies would be the natural outcome of a firm as markets grew. This was not an appealing result and the question of external economies was largely forgotten until Stigler's 1951 paper. Stigler (1951) developed a life-cycle theory of the firm, where in young industries firms tend to be highly integrated. As the industry grows and matures, firms disintegrate capturing economies of specialisation and division of labour. As the industry moves down the cycle again, re-integration of firms will occur, since eventually 'the division of labour is limited by the extent of the market'. Williamson (1975) argues that the processes hypothesised by Stigler will occur if transactions are frictionless, i.e. there are no transaction costs. Karantininis et al. (1997) use Williamson's argument to show that the type of organisation that maximises the profitability of cattle production in Canada can be determined by minimising the sum of production and transaction costs. Using three stages of cattle production (cow-calf, backgrounding, and feedlot) they demonstrate that the optimal organisation for beef production is a result of the difference in the economies of scale in the three stages. In the Karantininis et al. (1997) example, the economies of scale in a related stage of production affects the governance rules in another stage so as to minimise transaction costs and maximise profits.

The global farmer phenomenon is a very good natural experiment, where entrepreneurs establish an activity in two distinct economic and institutional environments. In order to explain how global farmers choose institutional arrangements in terms of contracts and agreements, we adopt the transaction cost perspective and in particular the property rights theory of the firm as developed by Barzel (2003), Grossman and Hart (1986), Hart and Moore (90),

Hart (1995), Gibbons (2005) and Baker *et al.* (2006). Barzel (2003) proposes that economic and legal rights are two distinct aspects of transaction dimensions. Any transaction is seen as transference of a set of property rights compounded by a number of specific dimensions that differ in terms of measurement costs of attributes being transacted as well as costs of the joint production effort. Institutional arrangements are designed to protect both economic and legal rights associated with production. Transaction dimensions that are easier to measure are coordinated via contracts and enforced by courts. Particular dimensions that are difficult to measure are considered too costly to be enforced by the state and are technically not contractible, being enforced by other means.

In cases where contracts emerge to govern the transactions it is easier – i.e. less costly – to leave the particular transaction to the market. In cases where state enforcement is not feasible, private mechanisms emerge to govern the particular set of transaction dimensions. Then economic rights are enforced by private mechanisms such as reputation and social ties.

It is expected that the costs to protect property rights decrease if legal ownership is well defined. They also decrease if the government's ability to enforce the rights increases and in relation to the ease of measuring particular transaction attributes. Measurement costs of particular attributes of complex transactions play the key role in this theory, since the larger such costs are, the more it will cost to define and secure property rights, which in turn has a distinctive

impact on the transaction costs of contracting and the costs of agreeing (Barzel, 1997).

Based on this theory, we propose that complex transactions in agriculture (hybrid forms) are made partially by means of contracts and agreements. Depending on the relative ability of the institutional arrangements to protect economic and legal rights, it might be preferable to draft an agreement or contract. We consider that when farmers choose a particular crop to produce, they simultaneously choose the degree of complexity of the transactions to be carried out. Therefore their social connectedness and local institutional characteristics limit the choices of activities to be developed. If the production technology demands many difficult-tomeasure dimensions, then it is more difficult to contract. We can predict that in the presence of high measurement costs and low governmental ability to enforce rights, informal enforcement mechanisms will be in place. Private agents are expected to replace governmental enforcement by offering guarantees to motivate buyers. If the firm does not have enough equity to guarantee the quality attributes, then it offers sub-optimal levels of the particular transaction attribute or an external agent can be hired to offer the guarantee. Barzel (2003) defines a firm as a nexus of agreements and components of agreements not enforced by the state. When markets do not work, enforceable contracts are replaced by mechanisms such as brand names, certification and reputation.

In the present study, we picture the institutional arrangement as a mixture of  $n_i$  contracts and  $n_j$  agreements or relational

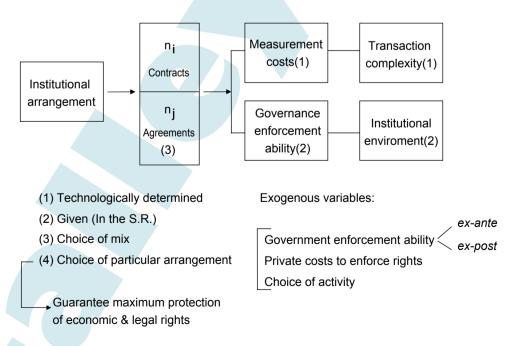


Figure 1. Measurement costs nature of institutional arrangements.

contracts. The terms 'agreement' and 'relational contract' are used interchangeably in this paper. They are defined as self-enforcing agreements that are too rooted in the parties' particular circumstances to be enforced by a court, but that can be enforced by the parties' concerns for their reputations (Baker et al., 2003: 6). In the literature, they are also called 'self-enforcing contracts' or 'implicit contracts' (Baker et al., 2003). Any dimension can be exchanged partially by a contract or by other means. The example offered by Barzel (2003) is the employment relation, where contracts are in place but several difficult-to-measure dimensions are agreed instead of contracted. Exogenous variables are the transaction complexity affecting the measurement costs and the institutional environment affecting the enforcement ability. Institutional environment is characterised by formal and informal rules related to 1st order economising as proposed by Williamson (2000), setting the stage of the differential capacity to perform the enforcement of rights. The transaction complexity and the cost of measurement are technologically determined. Farmers can choose among crops characterised by sets of attributes with distinct measurement costs. Both measurement costs and the enforcement ability will determine the site and the crop that the farmers decide to produce. It is also expected that the institutional arrangement defined as the proportion of n<sub>i</sub>/n<sub>i</sub> is chosen to minimise hazards related to the losses of rights of an economic and legal nature.

To supplement these arguments, we refer to Gibbons (2005), who proposes a variation of Williamson's (1985) illustration of the choice between market governance and hierarchy. Instead of depicting the transaction costs as a function of asset specificity, Gibbons argues that it is more empirically helpful to depict governance effectiveness as a function of transaction difficulty, which is an argument aligned with Barzel's measurement cost theory. We can then extend the scheme by adding hybrids as the governance structure between the markets and hierarchies continuum. Hybrids are governance forms that rely mostly on relational contracts, pooling of resources and 'co-opetition' (Ménard 2004; Baker et al., 2006; Brandenburger and Nulenbuff, 1996). Ménard (2004) refers to the three pillars of hybrids: pooling of resources; contracting; and the combination of competition and cooperation (co-opetition).

It is important to emphasise here that hierarchies are not void of transaction costs (Gibbons, 2005). Issues of monitoring, incentives, as well as rent seeking, plague firms as well as the other forms of governance. It is also useful to think of the order of governance choice as following the increasing degree of transaction difficulty: '...internal organisation is usefully thought of as the organisation form of last resort: try markets, try hybrids, and have recourse to the firm only when all else fails' (Williamson, 2005: 28).

In Figure 2, consider the curves labelled '\_et', 'Hybrid', and 'Firm' as representing the transaction difficulty of the three corresponding governance forms. We see that markets are more effective up to transaction difficulty level T (in the range M), whereas transactions would move inside the firm (vertical and horizontal integration) as transaction difficulty reaches levels beyond D (range F). In the intermediate range of difficulty TD, hybrid forms will be more effective (range N). The enforcement ability of the institutional environment could be added to this diagram as a third dimension. This is not depicted here for illustrative clarity, but the effects of enforceability could be captured as shifting any of the three effectiveness curves in Figure 2. As the effectiveness curve of hybrids shifts up to level  $H_{1}$ , we would more likely see hybrids within a wider span (H<sub>1</sub>) of transaction difficulty T<sub>1</sub>D<sub>1</sub>. Other such 'shifters' could be the longevity of the relationships between firms, historical path dependency, technological innovations, etc. Consequently, one could envisage that in a situation where the institutional environment discourages relational contracting, the effectiveness of hybrid forms could shift down to  $H_2$ . This would constrain the range of transactions to T<sub>2</sub>D<sub>2</sub> (range N<sub>2</sub>), and correspondingly more transactions would be handled within firms (>D2, range F2) or markets  $(<T_2$ , and range  $M_2$ ).

The relevant theory for this work considers both the micro and macro institutional perspectives related to the decision to become a global farmer and the property rights theory of the firm in dealing with governance instruments of complex activities. Macro aspects are borrowed from North (1990) in dealing with personal and impersonal trade, and micro elements are based on the property rights theory from Barzel (2003) in dealing with the role of the state, enforcement power and the institutional setting. We consider that in order for farmers to move between regions they consider the existence of formal institutions to support the contracts in an impersonal manner, since the newcomers will be alien to the local social groups at least for a period. From the micro institutional theory we borrow from the governance of contracts the existence and shape of complex contract relations developed in such a way that they provide the support to the insertion of the production in the market. Our hypothesis is that the activity and the institutional arrangement are chosen in such a way that production and transaction costs will be taken into account both for production and marketing of the product. Therefore, we maintain that efficiency reasons are relevant to explain farmers' strategies both in terms of the decision to farm in multiple sites, the choice of the activity and the institutional arrangement (choice of governance structure, or architecture of contracts and arrangements).

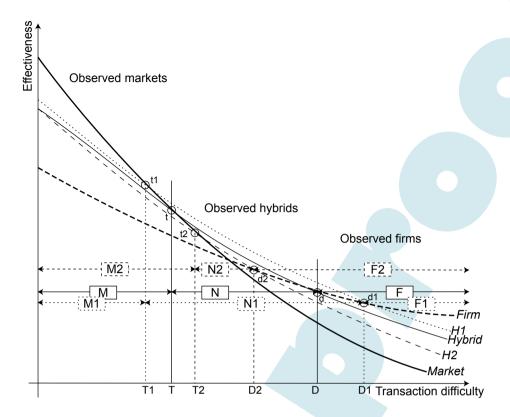


Figure 2. Transaction difficulty and effectiveness of governance structures.

A theory of global farming must consider the following four questions:

- 1. What makes farmers move away from where they are originally?
- 2. How do they choose a particular new geographic location and activity?
- 3. What institutional arrangements do they make ex ante in the new place in order to initiate and establish the new activity?
- 4. How do they adapt (*ex post*) to the complex contractual arrangement in the new environment?

Although these may be separate questions, the answers are usually interdependent. First, a farmer would never move from where he has been farming unless he finds a new place that would serve his interests better – hence his choice is based on the *relative* advantages and disadvantages of the new and old places (1 and 2). Secondly, it is a well-established fact – at least since Coase (1937) and Williamson (1971) – that the choice of governance is a result of optimisation over the combined production and transaction costs. Hence, the choice of governance structure (3) will be made in conjunction with the conditions found in the new place (2) relative to the previous one (1).

First, we predict that farmers move to new locations due to: (a) resource constraints which affect production costs, (b) policy barriers related to constraints for production such as quotas, environmental constraints, and other supply-controlling mechanisms, (c) efficiency of formal and informal institution-protecting rights (agreements and contracts), (d) connection with the distribution channel both in terms of proximity to the market and insertion in the international chain, and (e) existence of organised networks at the new location that the newly arrived farmer can easily 'plug into' (hybrid governance forms). More specifically, we hypothesise that:

- H1. Farmers carrying out activities related to the production of commodities that have well-structured channels and low monitoring costs are more likely to re-locate than farmers specialised in differentiated crops that demand co-specialised assets, horizontal cooperation and site-specific assets to support the production. And the corollary:
- H2: The better organised the networks of production and distribution are, the more mobility the farmers will have, since it is easier to place the production within an existing network.

- H3: In order to reduce risk, the global farmer will undertake activities in the host country that are similar to the ones they performed at home.
- H4: The more protected the farmer's rights are and the better the institutional environment is defined, the more attractive it will be for activities that demand the protection of intellectual and other property rights.
- H5: As the complexity of transactions increases in the new land, global farmers will choose more complex, hybrid or hierarchical organisational forms, and not the traditional family farm. This tendency is more pronounced when the production process is more complex, and the new environment in the host country has incompletely defined property rights, and lacks safeguarding institutions and general trust.

A farmer could, for example, decide to move from his well-established family farm to a new area, because he cannot expand production (due to high land prices and labour costs, environmental or other policy constraints). He could decide to move to a new area that offers more abundant land, cheap labour and proximity to a new market. However, the institutional environment might not be very favourable for a family farm, due to incomplete property rights, improper enforceability of contracts, or lack of local social ties. The farmer may then decide to establish a more vertically integrated farm in the new area.

In Figure 2, consider that the effectiveness of hybrids is Hybrid in the home country and H<sub>2</sub> in the new, and the transaction difficulty lies somewhere in the range DD<sub>2</sub>. Since the curve Firm, lies higher than Hybrid, in the home country, the farmer would operate a hybrid - a farm with many relational contracts, long-term agreements with employees, suppliers, customers, agronomists, veterinarians. The farmer is perhaps a member of a cooperative or farm association. In the new area, however, H2<Firm for the same range of transaction difficulty, and the farmer will have to internalise several of these transactions by vertical integration, and/or formal contracts with established firms. Alternatively, the farmer may decide to establish a new network in the new country (an association, a cooperative, long-term relationships with suppliers), shifting the H<sub>2</sub> curve upwards, in order to again operate a hybrid form. It is clear that time is an important element here. Since relational contracts have to do with reputation and repeated transactions, time is the foundation and raison d'être for the creation and maintenance of hybrids. As a result we should observe a shift of the curves in Figure 2 over time, and not necessarily in an instantaneous fashion.

# 4. Typology

We have observed and gathered data from a number of global farmers. In the following typology, we follow mostly legal definitions of governance structures. Our purpose is first to capture the conceptual framework developed in the previous section, and secondly to illustrate these concepts with our empirical observations. Wherever they are found in the world, Global farmers or their enterprises can be placed within one of the following categories: migrant ('pioneer' or 'settler'), partnership, corporation, multinational organisation.

### Migrant farmer

The first category is the more traditional type of global farmer. The world's agricultural history is full of examples of this type of profile. An individual who moves and settles into a new area voluntarily, but usually retains ownership of the property left behind in the country of origin (forced migration due to wars, ethnic cleansing, etc., is not included in this group). This type of farmer is characterised as a 'pioneer' if he moves into an area with no previous commercial agriculture. Usually these farms are both highly integrated and diversified. They would fit into the hybrid region of Figure 2, although they would approach the firm end of it, rather than the market.

### Partnership

This category differs from the previous one in that the global farmer forms a partnership in the new country with someone from his home country or with a local farmer. It is important to make this distinction for methodological and theoretic reasons. A partnership involves a different set of organisation problems, basically of transaction costs, property rights, and agency profile. Although the monitoring between partners in partnerships would involve fewer resources than in employer-employee relationships, partnerships are not immune to agency problems.

### Corporation

Although most of the global farmers who move into a new country are required to incorporate into some legal form of business, this category refers to those who form a formal legal partnership, explicitly for this reason. The new entity is financed with resources from the home country and involves the typical agent defined to carry out the activities. These tend to involve more vertical integration and formal contracting than simple partnerships.

### Multinational

This type of global farming differs from the previous one in that in this case the global 'farmer' is already an existing multinational corporation which extends its activities into a new country or region. Professional management applies and tends to be carried out under very formal types of relations. These are the representatives of hierarchies at the right-hand side of the spectrum in Figure 2, although they will usually involve a large number of formal contracts.

# 5. Methodology

There are no publicly available data on global farming. Hence, we collected our evidence based on a limited <sup>1</sup> number of case studies with qualitative interviews. The case study method has been recognised and accepted for theory testing and theory development in social studies <sup>2</sup> (Yin, 2003, 1981; Eisenhardt, 1989). The objective of the case studies was twofold: first to illustrate the typology with actual cases; and secondly, to provide qualitative evidence to support the hypotheses H1-H5 above derived from the theory.

Four case studies were conducted by means of interviews, two in Brazil and two in Latvia (Table 1). They comprise two migrant farmers in Brazil (Cases I.1 and I.2), one migrant farmer in Latvia (I.3), and one partnership in Latvia (II). Two more cases are also presented as illustrative examples, although we did not succeed in obtaining interviews for either of them: a corporate farm in Poland (III) and a multinational firm (IV).

The same questionnaire was used in every case to explore the reasons behind the farmers' choices, the specific contract profiles for farm resources and product marketing as well as the outcomes and institution-related costs faced by farmers. The methodology was based on descriptive qualitative analysis of procurement relations, horizontal cooperation, and marketing relations. The questionnaire was designed to capture differences in governmental ability to enforce contracts in addition to private mechanisms to elaborate agreements. Each case is made up of two parts: descriptions of farmers' profiles and of governance profiles.

We apply here both cross-case and within-case analysis (Yin, 2003, 1981). More specifically in the cross-case analysis we follow the case comparison approach, since the case survey approach would require a large number of cases.

<sup>1</sup> One must understand that it is very expensive to organise and execute interviews of global farmers, due mainly to travel costs. Hence the number of interviews is limited.

Both cross-case and within-case analyses are mostly based on qualitative data.

### 6. Case studies

The six cases described here illustrate the concepts discussed above and are organised according to the four categories in the given typology, The results of the interviews are presented in Table 2. A brief description and discussion of each case follows.

### Migrant farmers

Case I.1. US Farmer in Brazil

The North Dakota farmer TKP has been farming for more than 25 years at his farm in North Dakota and he now also farms in the Barreiras region, which was opened for commercial farming in the 1990s and is located at the western part of the State of Bahia, close to the border with Goiás in Brazil. The characteristics of the newly opened area attracted farmers from different parts of the country and from abroad, who were in search of opportunities, good soil and farming characteristics, and cheap land for cultivation. TKP first visited Brazil in 1985 and settled there definitively in 1990. He came alone and his business partners – he is part of a third generation of family farmers – continued to farm in North Dakota. TKP searched around the world for better conditions to produce grains and made his choice after checking many other sites.

The family's areas of production in Brazil and the US are about the same (2,600 hectares) and the main products are corn, cotton, coffee and fruits in Brazil and wheat, sunflower and soybean in the country of origin. In North Dakota the family business includes some processing and also marketing of farm inputs. In Brazil they have a brand name in the fruit business, and in the US they produce only commodities. From Brazil they export 35% of the value of production.

In dealing with contracts and agreements (governance structure), there are significant differences with respect to how contracts are handled in both countries. In Brazil TKP considers that all possible conflicts must be solved privately due to the high court costs. In other words, contracts are difficult to enforce, leaving more room for private arrangements. Labour contracts are particularly costly. Brazilian labour legislation is based on specialised courts that are strongly biased towards workers. He reported that the only problem he has had with the legal system in his first 15 years in Brazil is the frequency of labour law suits: workers have successfully sued him already six times. Due to the court bias, TKP reported that when workers learn that they can expect to win the cases they are quick to file

<sup>&</sup>lt;sup>2</sup> Bailey (1992) argues that the experimental method used by natural scientists is equivalent to case studies.

# 1. Typology and case studies.

Typology	Case #		Home country		country	
			Farming		Farming	
Migrant farmer	I.1	US	wheat, sunflower, soybean	BR	corn, cotton, coffee, fruits	
	I.2	US	grains	BR cotton, corn, soybean		
	I.3	DK	grains	LV	grains, woodchips	
Partnership	II	DK	pork	LV	pork, potatoes, tourism	
Corporation	III	DK	pork	PL	pork	
Multinational	IV	US	agribusiness	PL	pork	

Table 2. The survey.

	I.1 US farmer in BR		I.2 US farmer in BR		I.3 DK farmer in LV		II.1 DK farmer LV	
	Home	Host	Home	Host	Home	Host	Home	Host
Conflict resolution	Court							
Business environment								
Input suppliers	VGood	Adequate	VG	Bad	VGood	Bad		
Credit	Good	VBad	VGood	Bad	VGood	Bad	VGood	VBad
Local govern	Adequate	VBad			VGood	Bad	VGood	Bad
Other farmers	Adequate	Adequate			Good	Good		Bad
Marketing channel	Adequate	Bad	Good	Good	VGood	VBad	VGood	Bad
Labour relations	Adq-Bad	Bad	Bad	Good	VGood	VBad	VGood	Bad
Equipment	VGood	Adequate	Good	Bad	VGood	Bad	VGood	VBad
Judiciary	VGood	VBad	VGood	VBad	VGood	Bad	VGood	Bad
Transport logistics	VGood	Bad					VGood	Bad
Cooperatives	Good	Bad			VGood	Good	VGood	Bad
AG policies	Good	Bad			VGood	VG (EU)	VGood	VG(EU)
Monetary	Good	Bad	Good	Bad	Good	VBad	VGood	VBad
Credit	VGood	Bad			VGood	VBad	VGood	Bad
Environmental	Bad	Good	Good	Bad	Bad	Good	Bad	Adequate
Labour	NonExist	Bad			VGood	VBad	VGood	Good
Product standards	VGood	VBad			VGood	VBad	VGood	Bad
Food safety	Good	Bad	Good	Bad	VGood	VBad	VGood	Bad
GMO	VGood	VBad <sup>1</sup>						
Anti-trust	VGood	NonExist					Bad	Good
Land rights	VGood	Adq-Bad	VG	Bad	VGood	Good	VGood	Bad
Informal business	VGood	Adequate			VGood	VBad	VGood	Good
Social	Good	VGood	Good	VGood	Good	Good	Good	VGood
Costs	Low	High	High	Low	VHigh	High	VHigh	High
Trust	Good	Bad	-		VGood	VBad	VGood	Bad
Uncertainty	Low	High			Low	High	Low	High
Incorporation		Discrimin				Incorp		

<sup>&</sup>lt;sup>1</sup>Confusing.

a claim. In just one year TKP was confronted with 26 cases in the labour court. He believes, that the longer he carries out farming activities in Brazil, the more exposed to labour claims he will be.

Any foreign farmer in Brazil must incorporate their firm as a limited liability corporation, unlike the majority of Brazilian farmers who prefer not to incorporate, and would rather perform transactions as individuals than as incorporated firms. TKP believes that the foreign farmers' *legal obligation to incorporate* is discriminatory, since Brazilian farmers pay lower taxes due to their different status. Land lease contracts are more frequent in the US, while owning land in Brazil is still the norm.

### Case I.2. US farmer in Brazil:

TS arrived in Brazil at the end of 1999 and together with his North American associates bought land in the Barreiras region. His decision to come to Brazil was made based on studies of alternative regions for low-cost production and after travelling through a number of South American countries. He owns 3,585 hectares, 400 of which are under cultivation, and 20% of which is destined become an environmental reserve. He cultivates cotton, corn and soybean, typical commodities destined for the international markets. His motivation to come to Brazil stemmed from the lack of profitability of farming in his region in the US.

TS owns the storage capacity, rather than contracting it from local elevators or cooperatives. Access to credit is very difficult and most of the input acquisition transpires in cash. TS has no problem marketing his production since the channels are well structured and commodities are subject to standards that facilitate the performance of transactions. He chose the crops based on the facility to market the products through a wide variety of channels.

### Case I.3. Danish farmer in Latvia

MP is originally from a little town in North Jutland, Denmark, where he owned a 30-hectare farm and operated a small machinery repair shop. Today MP owns 200 hectares and rents another 400 hectares (at the going rate of 5 LATS/hectare, which is equal to the property tax). He started farming in Latvia in 2000, but did not move there permanently until 2002 when he married a Latvian. At his farm he also operates a small plant where he processes wood chips made from wood collected from sawmills in the surrounding area. He pellets the chips and exports them, mainly to Denmark, for fuel.

He reported having lost money during his first years in Latvia. He expects things to change now that he has moved there permanently and he expects to achieve his first positive balance in this harvest year. So far, his main income is derived from the wood processing. He also relies a lot on future EU subsidies. He has already made good use of these subsidies by buying most of his farm equipment with the help of about 60% in EU subsidies. He sells his grains through a newly formed cooperative, together with a Latvian, two other Danes and one British farmer, and he is satisfied with the way the cooperative operates.

MP identifies 'lack of service' as the main problem a global farmer faces in Latvia. The locals do not have a 'good business attitude', and problems with employees often involve 'shirking of duties and alcohol'.

### **Partnership**

### Case II.1. Danish farmer in Latvia

AR moved to Latvia for the first time in 1991 as a student. He then returned to Latvia every year, working as a summer employee at various jobs, mainly involving tourism. He learned the language, married a Latvian and now has a family and is founder and director of the Danish-owned firm DANLAT. Today, AR is based in Cēcis, a town east of the capital city Riga. The company, DANLAT, is administered by a six-member board of Danish investors and is involved in a number of activities involving tourism, consulting, and agriculture. The company's tourist office, which offers complete packages and specialises in agro-tourism, is already a successful business on its own. The company also owns and operates the main hotel in Cēcis.

The company's agricultural activities involve both crops, namely 800 hectares (400 owned and 400 rented) of feed grains and potatoes, and a pig farm of 450 sows (furrowto-finish), which has been in operation since 2001. The pig operation is located at an old Latvian Kolkhoz farm, which has been fully renovated using Danish technology and equipment. 'Trusted' Danish technicians were chosen to carry out the renovation because they were expected to do a better job and would require less monitoring – although they would have to be paid much higher salaries.

The pigs are sold to a local slaughterhouse, at live weight prices established on a monthly basis at 'satisfactory levels'. The company plans to eventually shift to slaughter weight prices. Traders sell the pork meat at meat markets in Cecis and Riga.

The potatoes are sold to a potato chip factory under contract. The company has also established a small packing plant where they clean and pack potatoes in 5kg bags, which are then sold to various shopping centres at spot prices.

When asked about key success factors, AR stressed the importance of 'being there'. The 'global farmer' needs to be there himself or have an absolutely trustworthy front man. It is also important that the global farmer develop relations with a 'right-hand' local person whom they can trust. A main problem is banking. Local bankers do not trust

farming. Although DANLAT has managed to acquire loans from Latvian banks, it is still partly financed by Danish funds.

### Corporation

Case III.1: Danish farmers in Poland: POLDANOR

POLDANOR was established in 1994 by 15 Danish pig producers who wanted to start pig farming in Poland. Today, POLDANOR has more than 70 Danish shareholders, produces more than 300,000 pigs annually, and is vertically integrated. Since 1999 POLDANOR has bought a packing plant and established PRIME FOOD, a plant that slaughters 7,500 pigs and 300 cattle weekly.

### Multinational

Case IV.1. American multinational in Poland: SMITHFIELD

SMITHFIELD FOODS entered Poland in 1999 by buying a controlling interest in ANIMEX – a former state-owned meat trading company. Today SMITHFIELD FOODS purchases about 50% of its pigs from 1,600 polish farmers through long-term contracts. The other half of its supply of pork comes from a spot market where approximately 20,000 farmers can deliver pigs to SMITHFIELD FOODS at one of its 23 buying stations around the country. Farmers who have signed contracts with SMITHFIELD FOODS have easier access to loans from Polish banks.

SMITHFIELD FOODS is also involved in contracts with the British multinational breeder PIC. PIC supplies breeding stock to farms owned by ANIMEX. PIC also supplies breeding stock to POLDANOR.

### 7. Discussion

The six cases are illustrative of the four types of organisation presented in the typology. Although these organisational forms are present in most countries, it is evident that farmers may choose a different form in the host country than the one they had at home even if the activities are similar. In the first three cases the farmers formed family farms (I), just like they had back home. However in the fourth case, the Danish farmers formed a partnership (II). It is not surprising that the partnership (II), corporation (III) and the multinational (IV) are all involved in pork production, whereas the family farms (I) are involved in crop commodities. These observations verify several of the hypotheses posed earlier: First, in H3 we asserted that global farmers tend to undertake the same activities in their new country that they knew best in their home country. In all of the studied cases, the farmers are involved in similar activities. In H5 we proposed that increased complexity of the transactions will lead to more complex organisational forms, hybrids or hierarchies. This is also verified by the observations of the case studies: Commodities (grains, fruits, coffee, etc.) are cultivated in all cases by migrant farmers, while pork farming – a much more complex activity – is organised as a partnership or corporate farming enterprise. Also, within these cases we find that certain activities are organised as hybrids. For instance in Case II.3, the Danish farmer formed a cooperative with other farmers to market their grains.

A very interesting observation was made in Case I.1, in that the farmer considers the costs of production to be higher in the host country than in his home country. It is obvious from his other answers that he is referring here mostly to transaction costs: lack of trust, labor conflicts, poorly defined property rights, etc.

# 8. Summary and conclusions

The present study is a first overview of the way in which global farmers design strategies and organise activities abroad. The cases describe profiles that correspond to partnerships and corporate farms. The institutional arrangements described suggest that farmers choose activities that have formally structured channels in place through which impersonal trade can be carried out. Farmers in Brazil have therefore chosen to produce grains and Danish farmers in Europe have chosen to produce grains, pigs, potatoes, as well as to diversify into tourism and wood for fuel. In all cases, they had not only previous experience but also low measurement costs, allowing for the emergence of contracts especially at the marketing side of the chain. Several comments presented in the cases point to the difficulties imposed by the lack of sufficiently developed institutions. For example, US and Danish farmers have difficulty obtaining credit due to the high interest rates characteristic of transition economies, and to the lack of information from and personal relations with the local banks.

Common problems encountered by global farmers are mostly cultural (business attitudes) and financial (non-satisfactory banking services). The lack of enforcement of legal rights seems to place some stress on the way farmers perceive the business environment. Problems of rights to land titles, fulfilment of contract conditions, and lack of personal relations with sales agents have been pointed out as elements that complicate the transactions to be realised. The incentives to move to the new areas seem to be

The incentives to move to the new areas seem to be particularly related to low costs of production, but in the European cases personal factors also played a role. In the Brazilian case, Barreiras is a newly opened farming area, which is not the case in Eastern Europe. However, it also

seems that farmers realised that low costs of land do not necessarily imply low costs of production when institutional factors are considered. For example, the labor costs are high when legal costs are taken into account. Transaction costs are high since farmers have to spend resources to protect property rights.

We found no examples of farmers engaged in the production of non-commodities. This suggests that more complex activities in which technology demands horizontal cooperation, such as with specialty products (wine, gourmet coffees), are not a likely choice for global farmers. Such activities demand informal agreements that are not supported only by impersonal relations. This evidence is supported by the recent theory related to 'netchains' in which value is created based on trust and social ties (Lazzarini *et al.*, 2000).

This paper opens the door to more detailed analysis of particular institutional arrangements adopted by global farmers. The basic hypothesis can be further discussed, namely the farmers' focus on commodities, the importance of contracts in marketing, and the role played by the definition and enforcement of property rights. Anecdotal evidence found in the cases suggests that the choice of easy-to-measure transactions related to the production of commodities, the smaller relevance of personal ties to support the transactions, the insertion into well-structured marketing channels (with clear definition of standards), and the business environment related to the lack of protection of rights are relevant variables to explain the phenomenon of global farmers.

All the findings reported in this paper suggest that complex contractual relations involving global farmers represent a promising vein for further exploration in the literature of chain, networks, hybrids, and agro-related contracts.

In this paper, we have not been able to address all the issues involved directly or indirectly with global farming, nor have we been able to confirm all the hypotheses put forward above. We did not explicitly discuss managerial issues, although they are an implicit part of the discussion of organisation, both in theory and in the case studies. Marketing of farm products by the global farmers will continue to be a major issue because the marketing channels in some host countries are poor or non-existent. The global farmers in these countries will have to improve them, bypass them, or create their own. All these are exciting research questions for the future.

Some of the hypotheses put forward in this paper would require more evidence, either from multiple case studies, or secondary data. We hope that this preliminary study has brought attention to the fact that more data is needed in order to first get a feeling of the magnitude of the global farmer phenomenon, and secondly to analyse it properly.

# **Acknowledgements**

We would like to thank the participants of the conference of the International Society for the New Institutional Economics, the conference of the International Food and Agribusiness Management Association, and the participants of the seminar at the School of Economics and Business of the University of São Paulo.

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